

NOTICE OF A REGULAR MEETING OF THE PLANNING COMMISSION OF THE TOWN OF CLARKDALE

Tuesday, February 20, 2018 4:00 pm Men's Lounge, Clark Memorial Clubhouse, 19 N. Ninth Street

In accordance with Resolution #215 of the Town of Clarkdale, and Section 38-431.02, Arizona Revised Statutes,

NOTICE IS HEREBY GIVEN that the Planning Commission of the Town of Clarkdale will hold <u>a</u>
REGULAR Meeting Tuesday,
February 20, 2018 at 4:00 p.m.,
in the Men's Lounge, Clark
Memorial Clubhouse, 19 N.
Ninth Street, Clarkdale, Arizona.
All members of the public are invited to attend.

GUIDELINES FOR PUBLIC COMMENT

The Town of Clarkdale endorses civil discourse. If you wish to speak at this meeting, please:

- Fill out a "Comment Card" and deliver to a staff person.
- When recognized, step to the podium and state your name and whether you are a Clarkdale resident.
- Direct all comments to the Planning Commission.
 Do not enter into a dialogue with the applicant or other members of the public.

The undersigned hereby certifies that a copy of this notice was duly posted on the Town Hall bulletin board, located at 890 Main Street, Clarkdale, Arizona on February 12, 2018 at 4:30 p.m.

15 cobox

Beth Escobar Senior Planner 1. CALL TO ORDER

- 2. ROLL CALL
- 3. <u>PUBLIC COMMENT</u>: The public is invited to provide comments at this time on items that are not on this agenda. Action taken as a result of public comment will be limited to directing staff to study the matter, or scheduling the matter for further consideration and decision on a later agenda, as required by the Arizona Open Meeting Law. Each speaker is asked to limit comments to FIVE MINUTES.
- 4. MINUTES:
 - a. Consideration of the Regular Meeting Minutes of January 16, 2018.
- 5. REPORTS:
 - a. Chairperson and Members Report
 - **b.** Director's Report
- 6. **NEW BUSINESS:**
 - a. <u>DISCUSSION/POSSIBLE ACTION</u> regarding the Broadway Corridor Focus Area Plan
 - **b. <u>DISCUSSION/POSSIBLE ACTION</u>** regarding permeable surfaces
- 7. FUTURE AGENDA ITEMS
- 8. ADJOURNMENT

MINUTES OF A REGULAR MEETING OF THE PLANNING COMMISSION OF THE TOWN OF CLARKDALE HELD ON TUESDAY, JANUARY 16, 2018 IN THE MEN'S LOUNGE, CLARK MEMORIAL CLUBHOUSE, 19 N. NINTH STREET, CLARKDALE, AZ.

A Regular Meeting of the Planning Commission of the Town of Clarkdale was held on Tuesday, January 16, 2018 at 4:00 p.m., in the Men's Lounge, Clark Memorial Clubhouse, 19 N. Ninth Street, Clarkdale, AZ.

Planning Commission:

Chair	Ida-Meri deBlanc	Present
Vice Chair	John Erickson	Present
Commissioners	Jorge Olguin	Present
	Craig Backus	Present
	Deborah Hunseder	Present

Staff:

Community Development Director Jodie Filardo Planning Manager Beth Escobar

- 1. <u>CALL TO ORDER:</u> Chair deBlanc called the meeting to order at 4:00 p.m.
- 2. **ROLL CALL** Director Filardo called the roll.
- 3. <u>PUBLIC COMMENT</u>: The public is invited to provide comments at this time on items that are not on this agenda. Action taken as a result of public comment will be limited to directing Staff to study the matter, or scheduling the matter for further consideration and decision on a later agenda, as required by the Arizona Open Meeting Law. Each speaker is asked to limit comments to **FIVE MINUTES**.

There was no public comment.

4. MINUTES:

a. Consideration of the Regular Meeting Minutes of December 19, 2017.

Commissioner Hunseder moved to approve the Regular Meeting Minutes of

November 21, 2017. Commissioner Erickson seconded the motion. The motion
passed unanimously.

5. REPORTS:

Chairpersons and Members Report:

Chair de Blanc reported that the weekly Game Day event has transitioned with support of Town staff and volunteers. Participation is growing.

Vice-chair Erickson reported the first round of the Food Pantry being run by St. Thomas Episcopal Church has been successful and will continue on every Tuesday starting in February. They hope to expand and reach out to homebound residents.

Commissioner Backus reported that he heard El Toreo will be moving into Nate's Cowboy Café's old location. Staff stated they had met with the owners who hope to be in operation at this new location by February.

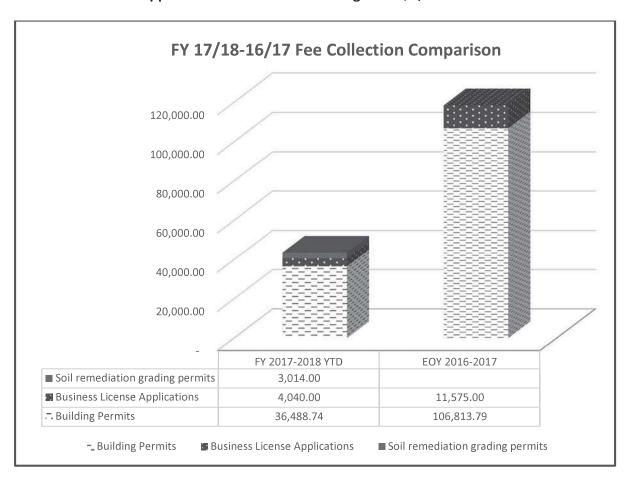
Director's Report

Director Filardo reported that the Clarkdale Downtown Business Alliance, through working with the Clarkdale Community Foundation, is now an official non-profit organization.

YTD Metrics as of December 2017 (50% complete) –

Building Permit Fees Collected = 48.7% of annual goal of \$81,000.

Business License Applications = 50.5% of annual goal of \$8,000.



6. Open Projects as of 1-9-18 – Balances due reflect permits awaiting pickup in CDD

*** PROJECT TYPE RECAP ***

PROJECT TYPE	# OF PROJECTS	BALANCE
		ACC -
ACCESSORY STRUCTURE	9	180.00
BP - BUILDING OTHER	5	0.00
BP - BUILDING REMODEL	13	2,452.80
BPC - BUILDING COMMERCIAL	1	0.00
BPR - BUILDING RESIDENTIAL	17	18,593.25
CU - CONDITIONAL USE	1	0.00
DECKS - DECKS	1	0.00
DM - DEMOLITION	2	0.00
EG - EXCAVATING & GRADING	4	0.00
ELECTRICAL - SOLAR	11	50.00
GSM - GRADING - SOIL REMED.	53	7,290.00
MH - MANUFAC HOME	2	0.00
PL - PLUMBING	3	55.00
RE-ROOF - RE-ROOF	8	0.00
SG - SIGN	1	0.00
SWIMPOOL - SWIMMING POOL	2	0.00
WF - WALL/FENCE	7	0.00
*** TOTALS ***	140	28,621.05

7. Upcoming Clarkdale Events –

- 8. 3-10-18 Clarkdale Car Show and Chili Cook-off
 - **4-14-18** Home Tour and Bank Robbery Reenactment
 - **4-21-18** Upper Verde River Fest To be confirmed

9. Project updates.

<u>United Verde Soil Program</u>. An additional 13 soil remediation grading permits were issued this week and two more are pending review for a total of 27 permit applications received. No remediation work has actually begun yet.

Bitter Creek Industrial Area Development and Infrastructure Plan. The engineering contract for the feasibility study was presented to Council for approval on



December 12th. With this contract, the estimated time of completion for the study is March 2018.

<u>Solar Installations</u>. Clarkdale now has 209 Solar Electric / 4 Solar Heated Water / 15 Solar Electric & Heated Water installations bringing our total Clarkdale of installed solar units to 228.

Mountain Gate Update. Staff met with Ralph Clemmer of Mountain Gate to review the proposed layout for four new model homes to be constructed by Mandalay Homes. These will be located on Cleopatra Hill Road and will include a parking area with an ADA portable toilet. They will have 14 separate models including variations on these four master plans. We anticipate receiving the building permits for the new model home complex in the next two weeks. The partnership between BC Land Group and Mandalay Homes was finalized on December 12. Mandalay Homes has already added the Mountain Gate project to their website and begun taking lot reservations: Mandalay Homes.

<u>Verde River Exchange.</u> Staff met with Jocelyn Gibbon, consultant for the Verde River Exchange Program. This program, developed by the Friends of the Verde River Greenway, allows for conservation of ground water through the purchase of water credits. Jocelyn is exploring options to involve local municipalities in incorporating the Water Offset Credits Program into development and planning decisions. Staff informed Jocelyn about Clarkdale's two recently adopted regulations, the Transfer of Development Rights and Croplands Ordinances that could incorporate including an offset program into new development projects. Staff looks forward to this continuing discussion. More information about this program is available at <u>Verde River Exchange - Water Offset Program</u>.

Enhanced Technology for CDD Customer Service. A new addition to CDD is the installation of an unused monitor to improve customer service at the front desk - the brainchild of Guss Espolt, with installation help from Paul Grasso and Peter deBlanc. This monitor usually plays the ExperienceClarkdale.com home page in rotation until it is needed to display electronic files to the individual at the front counter. With the digitization of all the permanent property files, CDD is now able to display all data related to a given parcel on behalf of residents, realtors, and homebuyers alike.



<u>United Verde Soil Program</u>. The eight permits received December 14 have completed the permit review process and are ready to issue pending review by Public Works. Seven additional permits were submitted December 21 and are being processed. Fifty-four permit applications have now been submitted.

- 10. Marketing. Town Website research. Staff reached out to the team at ReviZe to obtain a target training and implementation timetable. ReviZe is planning to deliver a site to the Town at the end of February. With the delivery, the content from the current pages from our website will be installed in the new format. Once the lead team is trained, a training for the remainder of the staff will take place. Based on what ReviZe sent and barring no delays, training of individuals in each department to update and manage their own pages will likely take place in mid-February. Once individuals are trained, each will replace the pages they are assigned one at a time as their new upgrades are reviewed and approved.
- 11. <u>OLD BUSINESS: DISCUSSION/POSSIBLE ACTION</u> regarding the Central Business District Focus Area Plan and review of public input received.

Senior Planner Escobar summarized the staff report:

Background:

The Commission has spent some time examining the impact of parking availability on the economic development potential of the Central Business District. After much discussion, staff has determined the best alternative to addressing the parking challenges in the Focus Area is to complete a parking study to identify locations for additional parking. This would be an engineered plan that designed appropriate parking spaces and sizes and addressed drainage and safety issues.

Some best practices to incorporate into the parking study:

- Have a base of daily available parking
- Be able to expand quickly when additional parking is needed (contingency based planning)
- Identify zones for longer term parking (in excess of 2 hours) for use by business owners and employees
- Identify parking areas for large vehicles commercial and RV parking
- Examine appropriate area for angled parking and potential back-in parking
- Incorporate motorcycle, bicycle and electric car parking areas with charging stations
- Weigh impact of potential new parking areas to adjacent residences

A slide is included in the Central Business Focus Area Plan that identifies future potential parking areas. Each of the areas could be examined during the study to determine the feasibility of developing additional parking at specific locations.

Other changes to the Plan:

The presentation has been reformatted for clarity. Specific strategies have been added (Slide #16).

Commission Action

Staff is requesting the Commission provide specific direction on the Focus Area Plan and/or recommend the Plan move forward to Town Council for consideration.

Commission Discussion

Commissioner Erickson summarized his recommendations regarding parking in the Central Business District:

- o Repaint all existing parking places in the downtown area and budget to do that twice a year.
- o Repaint the "in" and "out" arrows at the town parking lot again budget for twice a year.
- o Red paint at the entrance and exit of downtown alleys about 14' on either side of the alley.
- Red paint in front of all fire hydrants I think there are three in the area. There are other areas that had red paint. Can look at those spaces.
- o Yellow paint in front of the bus stop.
- o Remove 2 hour parking sign on 10th street.
- o Museum parking area west of the building on First North Street continue to cut the weeds and paint the "log" in front of the space white.
- People will figure out how and where to park once the area is cleaned up another budget item town staff.
- Old tennis court the town may need to have a conversation about parking there with the owners. Mark spaces?
- First South park side angle parking from??? or leave as it without any marking as now
 no marked spaces.
- When the new fire station is built there will be a few additional spaces in the area along 9th street in front of the building.
- o Parking area marked #7 on First South no marking does Mr. Synder have an access point to the lot?
- o Green property wine event last year used that spaces for valet parking and was handled by a private group.
- o Dragons Triangle area maybe mark with lime for a downtown event same with the small area near 10th and the Parkway by the white house.
- o If angle parking is considered then are some street made one-way? Interesting.
- Angle parking on First South on Park side from 11th to 9th one way. Also did that same thing from 9th to 11th one way on First South to 11th. Don't know if we would pick any worthwhile parking spaces but it was fun to try the angle parking. Most marked parking spaces are 8' x about 25'.
- Commissioner Olguin stated we need to maximize what exists.
- Commissioner Hunseder stated that repainting parking space markings and curbs once a year should be sufficient.
- Chair de Blanc stated the less formal parking that occurs during events like Concerts in the Park seems to work well
- Commissioner Olguin stressed it was important to keep in mind the impact of any expansion on the current residents

Commission Action:

Commissioner Hunseder moved to move the draft Central Business District Focus Area Plan forward to Council for consideration after language has been added to slide #16 conducting a parking study and recognizing development impact to existing residents in the downtown area.

7. **FUTURE AGENDA ITEMS:**

a. The Commission will begin working on the last focus area plan for the Broadway Corridor at the February meeting.

8. ADJOURNMENT:

a. <u>Commissioner Backus moved to adjourn the meeting. Commissioner Olguin seconded the motion. The meeting was adjourned at 4:34 p.m.</u>

APPROVED BY:	SUBMITTED BY:
Ida deBlanc	Beth Escobar
Chairperson	Planning Manager



Agenda Item: Department Update

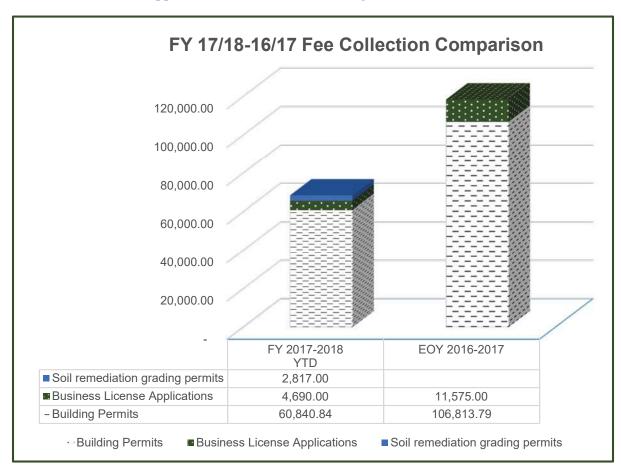
Community Development Department

Staff Contact: Jodie Filardo

Meeting Date: February 20, 2018

1. YTD Metrics as of January 2018 (58.3% complete) –

Building Permit Fees Collected = 78.6% of annual goal of \$81,000. Business License Applications = 58.6% of annual goal of \$8,000.





2. Open Projects as of 2-12-18 – Balances due reflect permits awaiting pickup in CDD

*** PROJECT TYPE RECAP ***

PROJECT TYPE	# OF PROJECTS	BALANCE
ACC - ACCESSORY STRUCTURE		44.00
BP - BUILDING OTHER	5	0.00
BP - BUILDING REMODEL	14	0.00
BPC - BUILDING COMMERCIAL	1	0.00
BPR - BUILDING RESIDENTIAL	19	4,436.25
CU - CONDITIONAL USE	1	0.00
DECKS - DECKS	1	0.00
DM - DEMOLITION	3	0.00
DRB - DESIGN REVIEW BOARD	1	0.00
EG - EXCAVATING & GRADING	4	0.00
ELECTRICAL - SOLAR	8	0.00
GSM - GRADING - SOIL REMED.	113	20,141.00
MH - MANUFAC HOME	2	0.00
PL - PLUMBING	3	0.00
RE-ROOF - RE-ROOF	7	0.00
SG - SIGN	2	0.00
SWIMPOOL - SWIMMING POOL	3	300.00
WF - WALL/FENCE	9	0.00
*** TOTALS ***	208	24,921.25

3. Upcoming Clarkdale Events –

3-10-18 – Clarkdale Car Show and Chili Cook-off – sign up to participate or volunteer at ClarkdaleCarShow.com

4-14-18 — Home Tour and Bank Robbery Reenactment

4-21-18 – Upper Verde River Fest – To be confirmed

4. Project updates.

United Verde Soil Program. Seven UVSP grading permits were issued this week for a total fee of \$1,305. Thirty permit applications are pending review and processing. These permits will be held until the UVSP deposit account has been replenished. In addition, we are experiencing high permitting volumes in Community Development. This is negatively affecting our ability to turnaround the grading and drainage permits in our preferred two-week turn time. Each permit takes an estimated 2 hours to process. This processing time coupled with the high volumes of all types of permits has resulted in permit processing time growth from around 2 weeks per permit to approximately 3 weeks. While staff continues to streamline the process as





much as possible, we are anticipating this processing time will continue to grow. We continue to monitor the situation.

<u>Website Updates</u>. The transfer of our current website data to our new platform is underway as of 2-6-18 at 9 AM. The Town Staff was notified that any updates to our old site need to be reapplied once the new site is live. Joni Westcott and Jodie Filardo will work together to keep track of updates that need to be applied. This step is expected to take two weeks. Following this load, a train-the-trainer webinar will take place.

<u>Multiple Family Residential Sustainability Guidelines.</u> In preparation for some anticipated new multi-family projects in Clarkdale, staff is developing draft guidelines for consideration by the Design Review Board. Some great sustainable resources have been identified and Mike has assembled a list of "low-hanging fruit" to be considered as possible criteria for the project. He included the information in the Staff Report and the Agenda for February's DRB meeting.

Olen Hicks' project update. Mr. Hicks has continued to work with the soils engineer to determine compaction at the site. He is hopeful that the report will be available by 2/2/2018. A couple of photos are attached.





Small-cell wireless facilities legislation. On March 31,

2017, Governor Ducey signed new legislation mandating small wireless facilities in municipal right-of-way without being subject to any site or design review requirements. The allowance includes a maximum 50-foot monopole and co-location on existing municipally owned infrastructure. Ground mounted supporting equipment is limited to 26.5 cubic feet in size. Small cell wireless systems provide a boost to existing wireless abilities allowing for 5G technology. They are generally deployed in areas where there is large demand for data, such as busy downtown areas and popular tourist areas.

The legislation has a February 9th 2018 deadline to adopt any new regulation in Town Code. Due to this short time window, and the vacating of local control by the new legislation, staff is recommending changes to the current ROW application managed by Public Works to include references to our existing



Wireless Facility Code, specifically the section outlining the requirement that wireless facilities be 'visible unobtrusive'. Placement would require a \$50 work in the right-of-way permit, and be subject to bonding requirements outlined in Section 15-1-3 of the Town Code.

Locations in Clarkdale where small cell wireless deployment might be considered by wireless providers and where the town has existing light poles on which the small-cell wireless might be placed are the Central Business Area and along Broadway by Verde Canyon Railroad. In both of these areas there is the potential for heavier than normal demand on bandwidth because of tourist traffic and crowd attendance at large events.

Clarkdale Classic Gas Station.

During the third week of January, the underground gasoline storage tanks were removed from the Clarkdale Classic Gas Station. While the removal represents the end of an era for the gas station, the good news is that there does not appear to be any leaking from the tanks. ADEQ is testing the soil to confirm there is no contamination present.





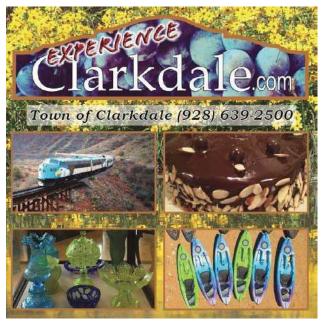
5. Marketing.

Clarkdale Downtown Business Alliance meeting. On February 6th, the monthly CDBA meeting took place at Four Eight Wineworks. Event preparations for the upcoming car show are in full swing. In addition to the regular team of volunteers, Ron Black and Dave Andrews attended on behalf of the Cottonwood Lions and representatives from the Sedona Car Show attended, too. There are seven confirmed different chili vendors and there are just over 50 cars already registered as of the end of January. This year there are four sponsors who have signed up to award \$100 prizes for each of these categories: Best Original, Best Modified, Best Truck and Best Motorcycle. We thanks Larry Green Chevrolet and Hyundai, Graham's Integrity Auto Sales, O'Reilly Auto Parts, and D&K Service, Cycle, and ATV for their support. We are still in need of volunteers and encourage folks to sign up via the website: www.ClarkdaleCarShow.com.



Arizona Drive Guide. Our new ad and copy were sent off to this publication this week. We participate in this print medium through the 50/50 match marketing collaborative through the Arizona Office of Tourism.

New Street Banners. Guss Espolt created (8) Main St. pole banners; the new designs will replace the 2014 pole banners on Main St. The 2018 pole banners will have an additional UV liquid application. This additional protection should prolong the lifespan of the banners. All banners are now installed along Main Street.

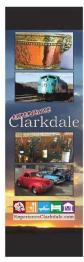




















Agenda Item: DISCUSSION/POSSIBLE ACTION regarding development of the

Focus Area Plan for the Broadway Corridor

Staff Contact: Beth Escobar

Meeting Date: February 20, 2017

Presented to: Planning Commission

Summary of area:

The Broadway Corridor Focus Area encompasses approximately 1.6 miles of roadway and provides a connection between Clarkdale and Old Town Cottonwood. This was the main travel way between the two communities until the SR 89A connection was completed.

Zoning

All of the property on the west side of the highway is zoned single-family residential. The east side of the highway has a mix of zoning, including single-family residential, single and limited multi-family residential, commercial, and industrial.

Existing Conditions

The Town's wastewater treatment plant is accessed off of Broadway Road. Other existing developments on the east side of Broadway include the Rain Spirit RV Resort and Sedona Wellness.

The majority of the west side of the highway corridor is completely undeveloped. There are a few homes in the Hollow Reed Road area. Palisades Drive provides access to three single-family residential neighborhoods, a metes and bounds development close to the highway, and the Palisades and Paz & Cota subdivisions. There is a small neighborhood between Sedona Wellness and Rain Spirit RV Resort on the east side.

Tuzigoot Road, on the east side, provides access to the National Monument, river access points and Sycamore Canyon.

Bent River Drive on the east side of the corridor provides access to single-family metes and bounds development as well as some multi-family complexes.

The Elks Lodge and the Moose Lodge are along the Broadway corridor.

Broadway crosses Deception Wash and Mescal Wash. This road serves as the main access to the Verde Canyon Railway.

The paved surface of Broadway is currently 50 feet with one lane traveling in each direction and no center turn lane. The right-of-way width is 200 feet.



General Plan

Unlike previous focus areas, the Broadway Corridor is not identified as a Planning Sub-area. The General Plan Map designates the majority of the corridor as Neighborhood Commercial, even though the underlying zoning for the majority of the property is residential.

Property Owners/Stakeholders Engagement

The majority of undeveloped property along the corridor has a single owner. Residents of the Palisades and Bent River area participated in the public hearings for Sedona Wellness and the RV resort. Staff would recommend they be included in the public outreach for this focus area plan.

Staff would also recommend representatives from the National Monument be invited to participate in the public input process.

Challenges

- Broadway Road would need to be improved once the surrounding area is built to capacity. Even though the right-of-way is wide enough there are some areas along the current roadway where there are steep slopes.
- There are no designated bike lanes on the road.
- Town water and sewer lines are in the roadway up to the Rain Spirit RV resort property.
- Mix of land uses along the corridor, and the support of the General Plan for Neighborhood Commercial development along both sides of the highway, could cause concern for existing residents.

Opportunities

- Scenic views
- Access to nearby recreational areas
- Trail connection possibilities
- Additional Broadway to SR 89A connections

The Process

The process established during drafting of the three previous focus area plans is to develop a draft plan, meet with property owners and stakeholders and then present the plan to the public through a variety of venues. Staff would like input from the Commission regarding the scheduling and format of these meetings.

Action Needed:

This is a general discussion item so the Commission can provide staff with direction on the development of the focus area plan.

Attachment:

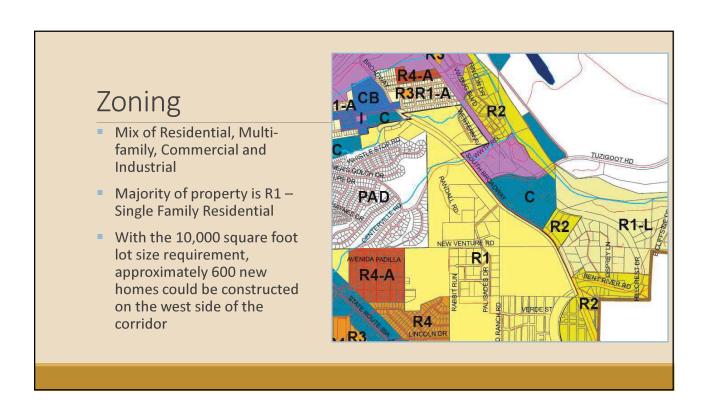
1. Draft Plan



Broadway Road

- Approximately 1.6 miles of roadway
- Provides connection between Old Town Cottonwood and Clarkdale
- Primary access for Verde Canyon Railroad
- Two major wash crossings at either end of corridor





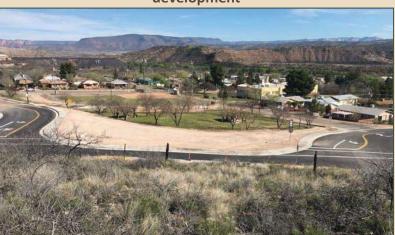
Existing Conditions

- Broadway is an arterial road connection between Cottonwood and Clarkdale
- Main route to Verde Canyon Railroad
- Provides access to Tuzigoot National Monument, two river access points and Sycamore Canyon Wilderness
- South entrance to Mountain Gate/Centerville Subdivisions
- Town wastewater plant is located off of corridor
- Rain Spirit RV Resort soon to be open
- Sedona Wellness is located on the east side
- Town water and sewer mains are in place up to the Rain Spirit RV Resort parcel
- On CAT's route one bus stop with shelter just south of Bent River Drive and one bus stop before Hollow Reed Road

The Plan

Goal:

To guide harmonious development that complements and sustains existing and new residential and commercial development



Challenges



- Major transportation corridor
- Impact of train traffic
- Capacity of Broadway at build-out
- Terrain
- Washes and drainage features
- Access from Broadway can be steep
- Mix of land uses with no buffer opportunity

Opportunities



- Establish an identity for the corridor
- Mix of Commercial and Residential
- Scenic Views
- Trail connections into Big Spring Trail at WWTP & Dorothy Benatz Trail
- Sidewalks and bike lanes along Broadway
- Additional Broadway to SR 89A connections

Public In	p or c		

Strategies

Discover Clarkdale – a place that makes sense **Community & Economic Development** Available vacant commercial and industrial property Department Population: 4,264 No development impact fees **Director Jodie Filardo** Regional Population: Top industries by jobs: manufacturing, transportation approx. 70,000 Rain Spirit RV Resort & warehousing, education, and information Rail accessible Labor Force: 1,657 Award-winning K-12 schools plus Yavapai College, the Educational **Southwest Wine Center, and Small Business** Attainment: **Development Center** Post-secondary: 64.13 % Small business friendly – 59% have 1-4 employees Household Median **Business promotion by Clarkdale Downtown Business** 890 Main Street (928) 639-2500 Income: \$52,051 Alliance **Member of Verde Valley Regional Economic** Median Home Price: We love to solve problems and meet challenges in new and unique ways. (Town of Clarkdale Guiding Principles) Organization \$205,000 or \$94/sq. Sedona Verde Valley Tourism Council partner **LocalFirst Arizo**na Member



Agenda Item: Discussion/Possible Action: Permeable Surface Options

Staff Contact: Mike Gray

Meeting Date: February 20, 2018

Presented to: Planning Commission

Background: In keeping with Clarkdale's Vision for Sustainability, the Planning Commission has asked Community Development to explore options for permeable surfaces as an alternative to asphalt and concrete paving. Impermeable surfaces (asphalt and concrete paving) come with some undesirable effects:

- They tend to concentrate high volumes of fast-moving water during heavy runoff events.
- The use of concrete and asphalt decreases soil infiltration area, preventing subsurface water absorption in the immediate area and transporting the water elsewhere.
- If not dealt with effectively, the runoff can contribute to standing water and a resulting mosquito breeding environment.
- It increases erosion at the margins of the impermeable surface.
- When cracks form in asphalt and concrete, water intrusion necessitates expensive repairs.
- Another problem, unrelated to runoff, is that larger expanses of impermeable surfaces in hot climates cause what is known as "urban heat island effect". (Fig.1)

Why the urban heat island effect occurs

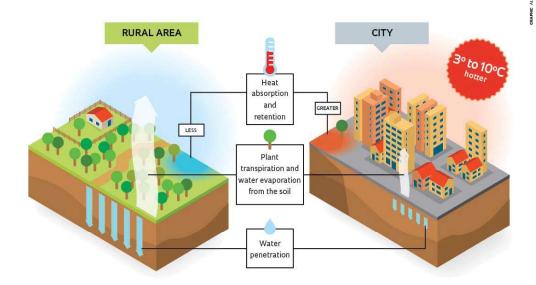


Fig. 1



Permeable surfaces, on the other hand:

- Are better at preventing fast, concentrated flows than impervious surfaces. While runoff coefficient varies widely between materials, their impact on storm runoff is almost always an improvement over impermeable surfaces. One foreseeable exception would be a situation in which sub-surface hard pan rock might direct infiltrated water toward a structure that could be adversely affected.
- Allow infiltration of precipitation into the soil. This minimizes evaporation loss and improves the rate of aquifer recharge.
- Decrease standing water and associated mosquito breeding habitat.
- Are undamaged by water incursion since they are designed to allow infiltration.
- Are less dense, and reduce the effects of "urban heat island" phenomenon. (Fig. 1)

Products:

Staff had some prior exposure to porous and permeable surfaces and also searched for other options online. The research yielded a multitude of block paver type solutions. Block pavers themselves are essentially impervious but depending on how they are installed, can allow water/and or vegetation between the blocks. In a case where the pavers allow grass to grow between the blocks, the roots are not protected, so the vegetation tends to die with any amount of traffic.

Staff felt it appropriate to examine the more porous approaches, and found three products that have been in use in Arizona; a decomposed granite stabilizer and two porous, open cell products, one of which (Envirogrid) had failed within a few years of installation.

The two remaining options were Stabilizer Solutions - stabilized, decomposed granite (SDG) and Invisible Structures GravelPave2. Both products are applied over road base. Of these two products, Colorado based Invisible Structures GravelPave2 has a lifespan of 25 years - similar to or exceeding asphalt and concrete, while Arizona based Stabilizer Solutions' SDG product requires periodic reapplication of the material. Both products comply with ADA requirements, are able to support heavy truck traffic (for instance, a fire department ladder truck with outriggers extended) and have demonstrated long-term durability with slow moving (ie: parking lot) traffic.

Vendors for both products were contacted. A representative for GravelPave2 visited Community Development and provided samples and specifications for a variety of related products. Staff spoke on the phone with Stabilizer Solutions representative. Both representatives are researching questions specific to their respective products including maximum grade, natural and recycled material content, and general clarification of information.

In the meantime, staff has assembled a rough cost comparison of a hypothetical 100' x 100' parking lot, assuming level surface with design & engineering complete and with 6" of



compacted AB already in place. Following is preliminary material and freight cost information (not including labor) provided by representatives for each product:

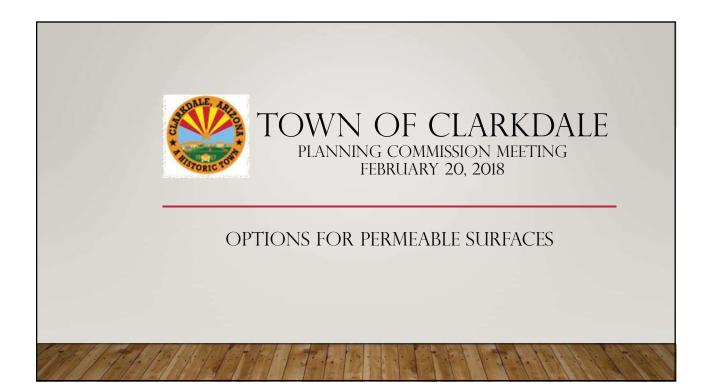
- 1. Stabilizer Solutions (SDG): Recommended 6" SDG at \$38.00/ton, plus per-truckload transportation from Phoenix (25 tons per truck). At a compacted 6" depth, a ton yields about 32.5 square feet (sf). The above hypothetical parking lot would require about 308 tons of the SDG material. This amount would require 13 truckloads. As of Feb. 15, staff is awaiting a per truckload quote for freight. Labor would have to be bid out.
- 2. The Gravelpave2 representative quoted approximately \$3.50/sf for the rolled material. At 10,000 sf, the cost for rolled product would be \$35,000 plus aggregate material at a depth of 1.25" to complete the surface. This lot would need 297 cubic yards for about \$700. Again, labor would have to be bid out.
- 3. Town of Clarkdale Public Works Superintendent estimated the same parking lot with 3" of asphalt at approximately \$24,522 plus mobilization, which could approach an additional \$15,000. This price would include labor.

Staff would like to advise the Commission, depending on what direction this discussion takes, code changes may be recommended to encourage the use of permeable surfaces as an alternative to asphalt and concrete.

Review:

Staff has had some general discussions with the Public Works Director regarding these products. Further review by the Police Department, Yavapai County Flood Control District and Verde Valley Fire District would be recommended.

<u>Recommendation:</u> This is a discussion item only. Staff is asking the Planning Commission to review the materials and direct staff regarding having this subject as a discussion item during the joint worksession with Town Council.



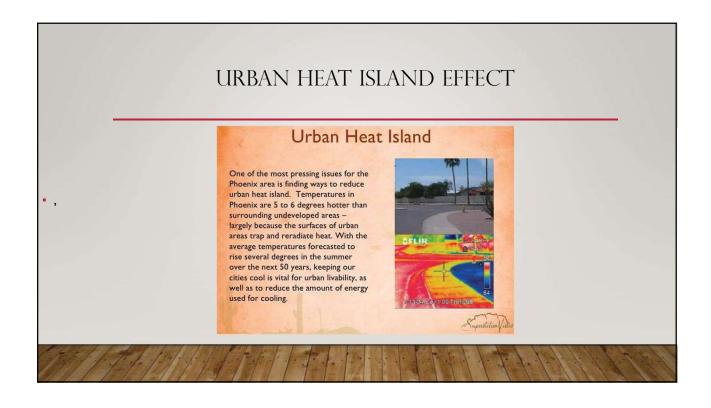
THE TROUBLE WITH IMPERVIOUS PAVING











TYPES STABILIZED, DECOMPOSED GRANITE OPEN CIRCULAR CELL **TABILIZED** OPEN CIRCULAR CELL **TABILIZED** OPEN CIRCULAR CELL **TABILIZED** OPEN CIRCULAR CELL



INVISIBLE STRUCTURES, INC. GRAVELPAVE 2 (OPEN CIRCULAR CELL TYPE)

- Unlimited lower speed traffic
- Approved by numerous major fire departments
- Similar lifespan to concrete (25 years), and far exceeding asphalt, but with less maintenance
- Runoff coefficient 0% 3% (Asphalt = 95%)
- Cost per sq ft = \$3.50 not including prep or surface
- 100% recycled product



INVISIBLE STRUCTURES, INC. - GRASSPAVE 2

(OPEN CIRCULAR CELLTYPE)

Can be used with native & decorative grasses

Lifespan 60 years

<u>Invisible Structures Grasspave 2 and Gravelpave 2 Video</u>

